

**Amendments to the Specification:**

After the title but before the first paragraph, please insert the following new paragraph:

**CROSS REFERENCE TO RELATED APPLICATIONS**

This application is a 371 filing of PCT International application no. PCT/IL2003/001011 filed November 27, 2003 and published in English as WO 2004/050825 on June 17, 2004 which claims the priority of United States application no. 60/429,532 filed November 29, 2002, the disclosures of which are hereby incorporated by reference in their entirety.

On a separate page, page 87, please insert the following abstract:

**ABSTRACT OF THE INVENTION**

A method and a device are disclosed for monitoring the synthesis of proteins by the ribosome in real time, *in vivo* as well as in *in-vitro*. The ribosome is engineered to carry a donor fluorophore, and tRNA and/or amino acids and/or some other part of the ribosome are either engineered to carry acceptor fluorophores or else their natural fluorescent properties are utilized as acceptors. As the ribosomes mechanism processed the mRNA and tRNA molecules and synthesizes a polypeptide chain, a light source illuminates the ribosome, exciting the donor fluorophores and thereby the acceptor fluorophores whenever these are in sufficient proximity to a donor. The resulting signals are detected and used as a key for real-time database searching and identification of the protein being synthesized. The resulting data can be tabulated and interpreted in different ways. Figure (1) describes the properties of a FRET pair and the dependence of FRET on pair distance.

Also enclosed herewith is a sequence listing (one page) in both paper and computer readable forms, for entry into the present application.